

REMARKS

Reconsideration and allowance of the present application are respectfully requested. Claims 28, 32, 41, 43, and 53-88 remain pending in the application. Claims 28, 32, 41, 43, 53, 55, 57, 68, 80, 83 and 86 are independent claims. By the foregoing amendment, claims 80-88 are added.

Applicants acknowledge with appreciation the Examiner's indication that claims 32, 55 and 56 are allowed (paragraph 10 of the Office Action), and the indication that claims 66, 67, 78 and 79 contain allowable subject matter (paragraph 11 of the Office Action). However, it is respectfully submitted that all pending claims are patentably distinct in their present form. The Examiner has failed to recognize significant differences possessed by the presently claimed invention over the documents relied upon in the Office Action.

In paragraph 4, page 2 of the Office Action, claims 28, 53, 54, 57, 58 and 61-64 stand rejected as being anticipated by U.S. Patent No. 6,049,328 (Vanderheiden). In paragraph 6, page 5 of the Office Action, claims 41 and 43 stand rejected as being anticipated by U.S. Patent No. 5,374,924 (McKiel, Jr.). In paragraph 8, page 7 of the Office Action, claims 59, 60, 65 and 68-77 stand rejected as being unpatentable over the Vanderheiden patent in view of the McKiel, Jr. patent. These rejections are respectfully traversed.

Applicants have disclosed a method for providing sound effects in which, among other disclosed features, an output characteristic of a sound effect can be varied using a data structure which includes variable parameters associated with at least one of gain, delay and pitch of an identified sound (e.g., page 8, and specifically at lines 18-28). Applicants have further disclosed that frequency

variation can be introduced to provide some auditory variety in both the one-shot and looping sound effects (e.g., page 11, lines 14-16). Accordingly, a common identified sound can be varied to produce different sound effects for different state transitions by varying one or more of these output parameters (page 8, lines 24-26).

Advantageously, small adjustments in a recorded sound effect can be made without actually re-recording the effect (page 8, lines 26-28).

The foregoing features are broadly encompassed by independent claims 28, 41, 43, 53, 57 and 68. For example, claim 28 recites, among other features, sound segments being associated with a transition between display states of a graphical user interface, wherein at least one data structure includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect. The applied references, when considered individually or in combination as suggested by the Examiner, do not teach or suggest the features recited in claims 28, 41, 43, 53, 57 and 68.

Claims 80-88 are added to cover for various permutations of a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect. Accordingly, Applicants respectfully submit that the added claims are also allowable.

The Vanderheiden patent

In numbered paragraph 4, pages 3 and 4 of the Office Action, the Examiner variously asserts that the Vanderheiden patent teaches that "at least one data structure includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect." Applicants respectfully traverse the Examiner's assertions.

Claim 28 recites, among other features, a first sound segment, a second sound segment and a third sound segment associated with a transition between display states of a graphical user interface, and at least one data structure including a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect; claim 53 recites, among other features, identifying a sound effect using a state table, said sound effect being associated with a transition from a first display state to a second display state, and varying an output characteristic of said sound effect using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of the identified sound effect to vary the output characteristic; claim 57 recites, among other features, producing a plurality of sound segments that are each associated with a transition between display states resulting from an object's movement on a graphical user interface, the plurality of sound segments using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments; and claim 68 recites, among other features, a processor for controlling the speaker to produce a sound effect in response to movement of the object from the first display position, the sound effect having a plurality of sound segments that are each associated with a transition between display states resulting from an object's movement on a graphical user interface, the plurality of sound segments using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments. The Vanderheiden patent does not teach or suggest at least these claimed features.

The Vanderheiden patent discloses that when a hand trajectory passes a displayed button, a second audio ridge signal 78 may be generated, preferably having different characteristics than a first audio ridge signal 76 so as to allow the user to discern the entry from the exits of a button (col. 7, line 65 through col. 8, line 2). Specifically, an audio ridge signal 76 may be a slightly higher pitched tone, as might occur if a real button were crossed; and audio tone 78 may be a lower pitched tone as if a finger or stylus were passing off of an elevated button (col. 8, lines 2-6). However, the Vanderheiden patent does not teach or suggest a given identified sound itself being varied to produce different sound effects for different state transitions by varying one or more of variable output parameters pertaining to a data structure.

On pages 3 and 4 of the Office Action the Examiner variously concludes that "the variation of the pitch tone is an example of a variable associated with the sound effect." Applicants respectfully disagree with the Examiner's ultimate conclusion. Rather, the Vanderheiden patent merely discloses that the audio ridge signal 76 may be a slightly higher pitched tone (col. 8, lines 2-9). Such a slightly higher pitched tone is a mere disclosure of a stored signal having a higher recorded pitch ready to be concatenated with another stored signal of a different pitch. This is clearly achievable without involving a variable parameter pertaining to a data structure. In contrast, the claimed data structure encompasses a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect from a given identified sound effect. At least for these reasons, the Vanderheiden patent does not teach or suggest a data structure including a variable parameter associated with at least one of gain, delay and pitch of an identified sound

to vary the produced sound effect as recited in claim 28, and as similarly recited in claims 53, 57 and 68.

The McKiel, Jr. patent does not cure the deficiencies of the Vanderheiden patent. While the Examiner variously concludes on page 8 of the Office Action that "the variation of the pitch tone is an example of a variable associated with the sound effect," Applicants respectfully disagrees with the Examiner's ultimate conclusion. The McKiel, Jr. patent merely discloses the pitch or frequency of a tone varying in stepwise fashion as a user moves a display pointer 27 across a display window 11. However, such a stepwise variance of display tone is a produced sound effect from its original recorded form. The playing of any such recorded sound effect can be clearly achieved without involving a variable parameter pertaining to a data structure. No such variability of a parameter pertaining to a data structure is suggested. In contrast, the claimed data structure encompasses a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect from a given identified sound effect.

Even if combined as suggested by the Examiner, the Vanderheiden patent and the McKiel, Jr. patent do not combine to teach or suggest using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one sound segment, as recited in claims 57 and 68.

Thus, independent claims 28, 53, 57 and 68 are allowable. Claim 54 depends from independent claim 53; claims 58-65 depend from claim 57; and claims 69-77 depend from claim 68 and recite further advantageous features which further distinguish over the document relied upon by the Examiner.

The McKiel, Jr. Patent

On pages 6 and 7 of the Office Action, the Examiner variously repeats her assertion that "the variation of the pitch/frequency tone is an example of a variable associated with the sound effect." Applicants respectfully disagree with the Examiner's ultimate conclusion.

Claims 41 and 43 recite, among other features, a processor for controlling a speaker to produce a sound effect in response to movement of an object from a first display position using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect. The McKiel, Jr. patent does not teach or suggest at least these claimed features.

On pages 6 and 7 of the Office Action, the Examiner relies on col. 4, lines 8-10 of the McKiel, Jr. patent, which recites "[a]s the user moves pointer 27 vertically or in the top/bottom axis of window 11, the pitch or frequency of the tone varies in stepwise fashion, as depicted by the scale 31 displayed along the left hand margin of window 11." However, as similarly argued above, such a stepwise variance of display tone is merely a produced sound effect from playing a stored signal in its original recorded form. The stepwise pitch as disclosed in the McKiel, Jr. patent is not the result of a varied sound effect from the use of a variable parameter pertaining to a data structure of a given identified sound. In contrast, the claimed data structure encompasses a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect from a given identified sound effect.

The McKiel, Jr. patent does not teach or suggest a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect, as recited in claims 41 and 43. Thus, independent claims 41 and 43 are allowable.

Conclusion

For the foregoing reasons, Applicants consider the application to be in condition for allowance and respectfully request notice thereof at an early date. The Examiner is encouraged to telephone the undersigned at the below-listed number if, in the Examiner's opinion, such a call would aid in the examination of this application.

Respectfully submitted,

BUCHANAN INGERSOLL ROONEY PC

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By: _____


Richard J. Kim
Registration No. 48,360

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620